

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Withdrawn) An apparatus for rolling a luminal graft into a low profile configuration, comprising:

two cylindrical rollers rotationally mounted on parallel axes;

a continuous belt disposed on said rollers to form an inner loop defining a pocket and an outer loop circumscribing said rollers and said inner loop;

a mandrel disposed within said pocket to maintain said pocket and press said graft against said belt; and

a tensioning device, applying tension to said belt.

2. (Withdrawn) The apparatus of claim 1 wherein said mandrel comprises a floating cylindrical pin.

3. (Withdrawn) The apparatus of claim 2 wherein said tensioning device comprises a removable tension rod positioned within said pocket, pressing said mandrel toward said belt and pinching said graft against said mandrel.

4. (Withdrawn) The apparatus of claim 1 further comprising a spring biasing said rollers toward each other.

5. (Withdrawn) The apparatus of claim 2 wherein said tensioning device comprises a spring biasing said outer loop of said belt.

6. (Withdrawn) The apparatus of claim 1 wherein said mandrel is a portion of a delivery system for said graft.

7. (Withdrawn) The apparatus of claim 6 wherein said mandrel is a catheter.
8. (Withdrawn) The apparatus of claim 6 wherein said mandrel is a guide wire.
9. (Withdrawn) The apparatus of claim 3 further comprising a frame configured to position said axes of said rollers and to restrain said starter rod.
10. (Withdrawn) The apparatus of claim 9 further comprising a crank for rotating one of said rollers.
11. (Withdrawn) The apparatus of claim 10 wherein the said crank comprises an electric motor rotating upon its axis when triggered by a switch for compression and loading of said graft.
12. (Withdrawn) The apparatus of claim 1 further comprising a graft tension rod positioned in contact with the inner surface of said graft to maintain uniform tension along the length of said graft.
13. (Withdrawn) The apparatus of claim 12 wherein said graft is bifurcated having a first and second leg with a common trunk, and wherein said tension rod is positioned in contact with the inner surface of said trunk and said first leg to maintain uniform tension along the length of said trunk and said first leg, the apparatus further comprising a second tension rod positioned in contact with the inner surface of said second leg to maintain uniform tension along the length of said second leg.
14. (Withdrawn) The apparatus of claim 2 wherein said mandrel further comprises a removable lock for fixing said graft to said pin.
15. (Withdrawn) The apparatus of claim 13 wherein said pin is configured to have an undercut diameter along a portion of its axial length to accommodate said graft and wherein said lock comprises fingers restraining a portion of said graft in said undercut diameter.

16. (Withdrawn) A method of rolling a luminal graft into a low profile configuration, comprising the steps of:

positioning a mandrel in contact with a surface of said graft;

placing said mandrel and a portion of said graft proximate a belt disposed on two essentially parallel cylindrical rollers;

positioning said rollers to form a pocket in said belt to retain said mandrel and said portion of said graft;

applying tension to said belt; and

rotating one of said rollers to roll said graft onto said mandrel.

17. (Withdrawn) The method of claim 16 further comprising the steps of:

introducing a temporary covering between said rollers after said graft is rolled onto said mandrel; and

continuing to rotate one of said rollers to roll temporary covering onto said graft.

18. (Withdrawn) The method of claim 16 wherein tension is applied to said graft while it is rolled onto said mandrel.

19. (Withdrawn) The method of claim 16 wherein said graft is a bifurcated graft having a main body in communication with two limbs, and said limbs are folded inside of said main body prior to rolling said graft onto said mandrel.

20. (Withdrawn) The method of claim 16 wherein said tension is applied to said belt by placing a tension rod into said pocket external to said graft.

21. (Withdrawn) The method of claim 16 wherein said tension is applied to said belt by a biasing device acting on said belt.
22. (Cancelled).
23. (Previously Presented) The rolled graft of claim 26 further comprising an aperture extending along an axis of said cylindrical rolled graft.
24. (Previously Presented) The rolled graft of claim 26 wherein said graft is rolled onto an axial member.
25. (Previously Presented) The rolled graft of claim 26 in combination with an expansion element disposed axially within said rolled graft.
26. (Currently Amended) A rolled graft, comprising a generally tubular graft flattened against itself and rolled onto itself into a cylindrical configuration, wherein said graft includes a larger diameter main section and two smaller diameter sections at an axial end of said larger diameter section, wherein a first smaller diameter section is rolled within a second smaller diameter section.
27. (Previously Presented) The rolled graft of claim 26 further comprising a temporary covering surrounding and restraining said graft in said cylindrical configuration.
28. (Original) The rolled graft of claim 27 wherein said temporary covering comprises perforations along its length, such that said temporary graft tears along said perforations when radially outward force is applied to said rolled graft.
29. (Original) The rolled graft of claim 27 wherein said temporary covering is absorbed after delivery into a body lumen.
30. (Previously Presented) The rolled graft of claim 27 further comprising means embedded in said temporary covering for failing said temporary covering after delivery into a body lumen.

31. (Withdrawn) A graft kit, comprising:

a low profile delivery system configured to deliver a rolled graft endoluminally; and

a plurality of differing grafts, each being compatible with a low profile delivery system, for selection of an optimal one of said plurality during a surgical procedure

at least one of said grafts comprising a low profile delivery configuration in which the graft is wrapped axially about itself.

32. (Withdrawn) The kit of claim 31 further comprising an apparatus for rolling a selected one of said grafts into a low profile configuration for endoluminal delivery.

33. (Withdrawn) The kit of claim 31 wherein all of said grafts are rolled grafts.

34. (Withdrawn) An endoluminal graft delivery system, comprising:

a member configured to be advanced through a body lumen from an access to a location remote from said access; and

a graft rolled on its longitudinal axis into a low profile rolled graft configuration over said member and radially constrained on said member during advancement through said body lumen.

35. (Withdrawn) The delivery system of claim 34 wherein said graft is permanently attached to a self-expanding stent associated with said member.

36. (Withdrawn) The delivery system of claim 34 wherein said member is a guide wire.

37. (Withdrawn) The delivery system of claim 34 wherein said member is a catheter.

38. (Withdrawn) The delivery system of claim 34 wherein said member is a self-expanding stent.

39. (Withdrawn) The delivery system of claim 34 wherein said member is an expandable stent.

40. (Withdrawn) The delivery system of claim 34 wherein said member is a combination of one or more of a guide wire, a catheter, and a stent.

41. (Withdrawn) The delivery system of claim 34 wherein said graft is radially constrained by a sheath, which is axially withdrawn to release, said graft.

42. (Withdrawn) The delivery system of claim 34 further comprising an expansion device disposed radially within said rolled graft.

43 (Withdrawn) The delivery system of claim 42 wherein said expansion device is a balloon.

44. (Withdrawn) The delivery system of claim 42 further comprising an inner sheath disposed between said expansion device and said rolled graft, said inner sheath being axially movable relative to said rolled graft.

45. (Withdrawn) The delivery system of claim 34 wherein said rolled graft is radially constrained by a temporary covering during advancement through said body lumen.

46. (Withdrawn) A method for delivering a luminal graft into a body lumen comprising the steps of:

rolling said graft upon itself into a low-profile rolled configuration;

restraining said graft in said rolled configuration;

endoluminally delivering said graft into a body lumen; and

applying radially outward force to said graft to expand said graft into a tubular, deployed configuration.

47. (Withdrawn) The method of claim 46 wherein the step of restraining said graft comprises applying a temporary covering surrounding said graft in said rolled configuration.

48. (Withdrawn) The method of claim 47 wherein said temporary covering comprises perforations along its length, and said radially outward force causes said temporary covering to tear along said perforations.

49. (Withdrawn) The method of claim 47, further comprising, prior to the step of applying radially outward force, the step of releasing said temporary covering.

50. (Withdrawn) The method of claim 49 wherein the step of releasing said temporary covering comprises allowing said temporary covering to be absorbed into the body.

51. (Withdrawn) The method of claim 49 wherein the step of releasing said temporary covering comprises pulling a rip cord or ribbon to fail said temporary covering.

52. (New) A rolled graft, comprising a generally tubular graft flattened against itself and rolled onto itself into a cylindrical configuration, wherein said graft includes a larger diameter main section and two smaller diameter sections at an axial end of said larger diameter section, wherein the two smaller diameter sections are disposed within the main section.